

What is claimed is:

1. A process for producing compound semiconductor single crystal, comprising the steps of:

putting a compound semiconductor raw material into a crucible,

setting the crucible in a vertical type of heating furnace to heat and melt the raw material by a heater,

promoting a nucleation on a surface of a raw material melt by leaving a solid raw material in a part of the raw material melt,

solidifying the raw material melt gradually from the surface of the raw material melt without a seed crystal, and

growing a crystal by using a nucleus generated by the nucleation.